REFERENCES 85

[131] W. Wang, Y. Zheng, X. Xing, Y. Kwon, X. Zhang, and P. Eugster, "WebRanz: Web Page Randomization for Better Advertisement Delivery and Web-Bot Prevention," FSE 2016, p. 205–216, 2016.

- [132] H. Aghakhani, F. Gritti, F. Mecca, M. Lindorfer, S. Ortolani, D. Balzarotti, G. Vigna, and C. Kruegel, "When Malware is Packin' Heat; Limits of Machine Learning Classifiers Based on Static Analysis Features," in 27th Annual Network and Distributed System Security Symposium, NDSS 2020, San Diego, California, USA, February 23-26, 2020, The Internet Society, 2020.
- [133] M. W. J. Chua and V. Balachandran, "Effectiveness of Android Obfuscation on Evading Anti-malware," in *Proceedings of the Eighth ACM Conference on Data and Application Security and Privacy, CODASPY*, pp. 143–145, 2018.
- [134] P. Dasgupta and Z. Osman, "A Comparison of State-of-the-art Techniques for Generating Adversarial Malware Binaries," CoRR, vol. abs/2111.11487, 2021.
- [135] G. Lu and S. K. Debray, "Weaknesses in Defenses against Web-borne Malware," in Proceedings of Detection of Intrusions and Malware, and Vulnerability Assessment - 10th International Conference, DIMVA 2013, vol. 7967, pp. 139–149, Springer, 2013.
- [136] M. Payer, "Embracing the New Threat: Towards Automatically Selfdiversifying Malware," in *Proceedings of The Symposium on Security for Asia* Network, pp. 1–5, 2014.
- [137] N. Loose, F. Mächtle, C. Pott, V. Bezsmertnyi, and T. Eisenbarth, "Madvex: Instrumentation-based Adversarial Attacks on Machine Learning Malware Detection," in *Detection of Intrusions and Malware, and Vulnerability Assessment 20th International Conference, DIMVA 2023*, vol. 13959 of Lecture Notes in Computer Science, pp. 69–88, 2023.
- [138] A. V. Aho, R. Sethi, and J. D. Ullman, Compilers: Principles, Techniques, and Tools, ch. 1, pp. 28–31. 1986.
- [139] R. Sasnauskas, Y. Chen, P. Collingbourne, J. Ketema, J. Taneja, and J. Regehr, "Souper: A Synthesizing Superoptimizer," CoRR, vol. abs/1711.04422, 2017.
- [140] B. G. Ryder, "Constructing the Call Graph of a Program," *IEEE Transactions on Software Engineering*, no. 3, pp. 216–226, 1979.
- [141] S. Narayan, C. Disselkoen, D. Moghimi, S. Cauligi, E. Johnson, Z. Gang, A. Vahldiek-Oberwagner, R. Sahita, H. Shacham, D. M. Tullsen, and D. Stefan, "Swivel: Hardening WebAssembly against Spectre," in 30th

86 REFERENCES

- *USENIX Security Symposium*, *USENIX Security 2021*, *August 11-13*, 2021, pp. 1433–1450, 2021.
- [142] M. Willsey, C. Nandi, Y. R. Wang, O. Flatt, Z. Tatlock, and P. Panchekha, "Egg: Fast and Extensible Equality Saturation," Proc. ACM Program. Lang., vol. 5, no. POPL, pp. 1–29, 2021.
- [143] "Stop a wasm compiler bug before it becomes a problem | fastly." https://www.fastly.com/blog/defense-in-depth-stopping-a-wasm-compiler-bug-before-it-became-a-problem, 2021.
- [144] D. Cao, R. Kunkel, C. Nandi, M. Willsey, Z. Tatlock, and N. Polikarpova, "babble: Learning Better Abstractions with E-Graphs and Anti-unification," Proc. ACM Program. Lang., vol. 7, no. POPL, pp. 396–424, 2023.
- [145] R. Tate, M. Stepp, Z. Tatlock, and S. Lerner, "Equality Saturation: A New Approach to Optimization," in *Proceedings of the 36th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, POPL*, pp. 264–276, 2009.
- [146] T. D. Morgan and J. W. Morgan, "Web Timing Attacks Made Practical," Black Hat, 2015.
- [147] T. Schnitzler, K. Kohls, E. Bitsikas, and C. Pöpper, "Hope of Delivery: Extracting User Locations From Mobile Instant Messengers," in 30th Annual Network and Distributed System Security Symposium, NDSS 2023, San Diego, California, USA, February 27 March 3, 2023, The Internet Society, 2023.
- [148] Mozilla, "Protections Against Fingerprinting and Cryptocurrency Mining Available in Firefox Nightly and Beta," 2019.
- [149] F. Cohen, "Computer Viruses: Theory and Experiments," *Comput. Secur.*, vol. 6, no. 1, pp. 22–35, 1987.
- [150] P. Kocher, D. Genkin, D. Gruss, W. Haas, M. Hamburg, M. Lipp, S. Mangard, T. Prescher, M. Schwarz, and Y. Yarom, "Spectre Attacks: Exploiting Speculative Execution," meltdownattack.com, 2018.
- [151] M. Schwarz, C. Maurice, D. Gruss, and S. Mangard, "Fantastic Timers and Where to Find Them: High-resolution Microarchitectural Attacks in JavaScript," in *Financial Cryptography and Data Security - 21st International* Conference, FC, vol. 10322, pp. 247–267, 2017.
- [152] G. J. Duck, X. Gao, and A. Roychoudhury, "Binary Rewriting Without Control Flow Recovery," in Proceedings of the 41st ACM SIGPLAN International Conference on Programming Language Design and Implementation, PLDI, pp. 151–163, 2020.